

IN VIVO HIGH THROUGHPUT TOXICOLOGY SCREENING METHOD**ABSTRACT OF THE DISCLOSURE**

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A high throughput toxicology screening method is provided. In the subject method, at least 10 different compound compositions are tested simultaneously. Each compound composition is tested by contacting it with a plurality, e.g. from about 10 to 1000, of non-mammalian multi-cellular organisms and determining the effect of the compound composition on the organisms. The multi-cellular organisms employed in the subject methods are small, have differentiated tissues and organs and have a rapid generation time. The subject high throughput screening methods find use in a variety of applications, and are particularly suited for use in the toxicology screening of libraries of compounds, such as libraries of combinatorially produced compounds.

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